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Steward et al.

(54) BAFFLE FOR AUTOMOTIVE TRANSMISSION

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(56) References Cited

U.S. PATENT DOCUMENTS

4,895,268	A	1/1990	Hyde
5,791,262	A	8/1998	Knight et al.
6,886,833	B1	5/2005	von Engelbrechten et al.
7,712,581	B2	5/2010	Billings et al.
006/0065487	A1	3/2006	Tominaga et al.
06/0179973	A1	8/2006	Matsufuii et al.

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(57) ABSTRACT

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A transmission in a vehicle includes a gearbox and a differential. Torque is transferred from an output of the gearbox to an input of the differential via a drive member. This transfers torque to enable the differential to distribute the torque amongst wheels of the vehicle. A transmission housing and a torque converter housing are mounted to one another to at least partially house the gearbox and the differential, respectively. A transmission fluid sump is provided between the housings where transmission fluid gathers. A fluid pump pressurizes the fluid and distributes it amongst working parts in the transmission. A baffle assembly partially contains the drive member and segregates the fluid sump from the drive member. One of the baffles in the assembly includes a lip engaging a portion of an outer flange of the pump to provide a seal between the fluid pump and components within the transmission.

18 Claims, 4 Drawing Sheets

